

CLAIMS:

1. A method for injecting cells into elastically deformable biological tissues comprising:

adhering the tissue at least in part on a support member;

positioning an injection needle at a desired site of the tissue;

generating microvibration in said needle;

piercing the tissue with said needle at said desired site; and

injecting a cell suspension through said needle.

2. The method of claim 1 wherein said cell suspension is injected in a metered volume using fluid metering means.

3. The method of claim 1 or 2 wherein said needle is positioned in said desired site using means for automatically positioning said needle in three dimensional coordinates.

4. The method of one of claims 1-3 wherein the tissue is adhered by suction.

5. The method of one of claims 1-4 wherein said microvibration is generated by a mechanical vibrator, an electrical oscillator or a ultrasonic vibrator.

6. The method of one of claims 1-5 wherein said tissue is of human or other mammalian origin.

7. A system for injecting cells into elastically deformable biological tissue comprising:

means for adhering the tissue at least in part on a supporting member;

means for positioning an injection needle at a desired site of the tissue;

means for generating microvibration in said needle;

means for piercing tissue with said needle at said desired site; and

means for injection a cell suspension through said needle.

8. The system of claim 7 further comprising means for precisely metering said cell suspension in a predetermined volume.

9. The system of claim 7 or 8 further comprising means for automatically positioning said needle in three dimensional coordinates.

10. The system of one of claims 7-9 wherein said adhering means applies a suction pressure on the tissue through said support member.

11. The system of one of claims 7-10 wherein said microvibration means comprises a mechanical vibrater, an electrical oscillator or a ultrasonic vibrator.

12. The system of one of claims 7-11 wherein said

biological tissue is of human or other mammalian
origin.